



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAVID P. LITTELL
COMMISSIONER

**X Café LLC
Cumberland County
Portland, Maine
A-901-71-B-R/A**

**Departmental
Findings of Fact and Order
Air Emission License**

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., §344 and §590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

1. X Café LLC (X Café) has applied to renew their Air Emission License permitting the operation of emission sources associated with their coffee roasting/extraction facility.
2. The equipment addressed in this license is located at 40 Quarry Road, Portland, Maine
3. X Café has requested an amendment to their license in order to increase the facility wide fuel limit and revise the emission factors used for the coffee roasters.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Fuel Burning Equipment

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate (scf/hr)</u>	<u>Fuel Type, % sulfur</u>	<u>Stack #</u>
Boiler #1	3.56	3,460	Natural Gas, negligible	1
Boiler #2	3.56	3,460	Natural Gas, negligible	2
Coffee Roaster #1	1.6 (1.232 ton/hr)	1,550	Natural Gas, negligible	3
Coffee Roaster #2	1.6 (1.232 ton/hr)	1,550	Natural Gas, negligible	3

Note – The previously licensed Hot Water Boiler has been removed from the facility.

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04679-2094
(207) 764-0477 FAX: (207) 760-3143

C. Application Classification

The modification of a minor source is considered a major modification based on whether or not expected emission increases exceed the “Significant Emission Levels” as defined in the Department’s regulations. The emission increases are determined by subtracting the current licensed emissions preceding the modification from the maximum future licensed allowed emissions, as follows:

<u>Pollutant</u>	<u>Current License (TPY)</u>	<u>Future License (TPY)</u>	<u>Net Change (TPY)</u>	<u>Sig. Level</u>
PM	1.5	9.5	+8.0	100
PM ₁₀	1.5	9.5	+8.0	100
SO ₂	--	--	--	100
NO _x	0.1	4.4	+4.3	100
CO	0.1	3.7	+3.6	100
VOC	9.3	9.4	+0.1	50

Therefore, the license is considered to be a renewal with a minor modification and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (last amended December 24, 2005).

II. **BEST PRACTICAL TREATMENT (BPT)**

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 CMR 100 (last amended December 24, 2005). Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Change to Facility Wide Fuel Limit

Facility wide natural gas usage was previously limited to 2.0 million scf/year. Due to the relatively low emissions, X Café has requested that this limit be removed. The Department agrees with this assessment. Therefore the annual emissions from natural gas firing are based on the potential maximum firing of Boilers #1 and #2 and the coffee roasters.

C. Boilers #1 and #2

Boilers #1 and #2 each have a maximum heat input of less than 10 MMBtu/hr and are therefore not subject to the New Source Performance Standards (NSPS) Subpart Dc for steam generating units greater than 10 MMBtu/hr manufactured after June 9, 1989.

A summary of the BPT analysis for Boilers #1 & #2 (3.56 MMBtu/hr each) is the following:

1. Chapter 103 regulates PM emission limits, however in this case a BPT analysis for PM determined a more stringent limit of 0.05 lb/MMBtu was appropriate and shall be used. The PM₁₀ limits are derived from the PM limits.
2. NO_x, CO, and VOC emission limits are based upon AP-42 data dated 7/98.
3. Visible emissions from Boilers #1 and #2 shall each not exceed 10% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block averages in a continuous 3-hour period.

D. Coffee Roasters

X Café operates two (2) coffee roasters each with a maximum heat input of 1.6 MMBtu/hr and a maximum process rate of 1.232 ton of coffee beans per hour. Emissions from the coffee roasters are controlled by a wet scrubber on the roaster's common stack.

When the coffee beans are roasted above 350°F chaff is released that can lead to significant amounts of PM. Additionally, VOCs start to volatilize and are emitted as well. BTP for the control of PM and VOC from the coffee roasters includes the use of a wet scrubber for control of these pollutants.

A summary of the BPT analysis for Coffee Roasters #1 and #2 is the following:

1. X Café shall operate the wet scrubber on the coffee roaster stack whenever either roaster is operating above 350°F.
2. PM emissions are based on AP-42 data (Section 9.13.2) dated 9/95 for continuous coffee roasters since emission factors for batch roasters without a thermal oxidizer were not available. AP-42 stated that PM emissions for continuous and batch roasters were determined to be similar.

3. VOC emissions are based on AP-42 data for batch coffee roasters (Section 9.13.2) dated 9/95.
4. NO_x and CO emission limits are based upon AP-42 data for natural gas firing dated 7/98.
5. Visible emissions from the coffee roaster stack shall not exceed 20% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block averages in a continuous 3-hour period.

E. Annual Emissions

X Café shall be restricted to the following annual emissions, based on a 12 month rolling total:

Total Licensed Annual Emissions for the Facility
Tons/year
(used to calculate the annual license fee)

	PM	PM₁₀	NO_x	CO	VOC
Facility Wide Natural Gas Firing	2.3	2.3	4.4	3.7	0.2
Coffee Roaster #1	3.6	3.6	--	--	4.6
Coffee Roaster #2	3.6	3.6	--	--	4.6
Total TPY	9.5	9.5	4.4	3.7	9.4

III. AMBIENT AIR QUALITY ANALYSIS

According to 06-096 CMR 115, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Modeling and monitoring are not required for a renewal if the total emissions of any pollutant released do not exceed the following:

<u>Pollutant</u>	<u>Tons/Year</u>
PM	25
PM ₁₀	25
SO ₂	50
NO _x	100
CO	250

Based on the total facility licensed emissions X Café is below the emissions level required for modeling and monitoring.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-901-71-B-R/A subject to the following conditions.

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 M.R.S.A. §347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [06-096 CMR 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 CMR 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 CMR 115]

- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353. [06-096 CMR 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 CMR 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 CMR 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 CMR 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
 - A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 2. pursuant to any other requirement of this license to perform stack testing.
 - B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - C. submit a written report to the Department within thirty (30) days from date of test completion.[06-096 CMR 115]

- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
 - B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
- [06-096 CMR 115]
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 CMR 115]
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 CMR 115]

SPECIFIC CONDITIONS

(16) Boilers #1 and #2

A. X Café shall fire only natural gas in Boilers #1 and #2.

[06-096 CMR 115, BPT]

B. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler #1	PM	0.05	06-096 CMR 115, BPT
Boiler #2	PM	0.05	06-096 CMR 115, BPT

C. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

Emission Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1	0.18	0.18	0.35	0.29	0.02
Boiler #2	0.18	0.18	0.35	0.29	0.02

D. Visible emissions from Boilers #1 and #2 shall each not exceed 10% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block average in a continuous 3-hour period. [06-096 CMR 101]

(17) Coffee Roasters #1 and #2

A. X Café shall fire only natural gas in Coffee Roasters #1 and #2.

[06-096 CMR 115, BPT]

B. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

Emission Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Coffee Roaster #1	0.81	0.81	0.16	0.13	1.06
Coffee Roaster #2	0.81	0.81	0.16	0.13	1.06

C. Visible emissions from the coffee roaster stack shall not exceed 20% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block average in a continuous 3-hour period. [06-096 CMR 101]

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- D. X Café shall operate the wet scrubber on the coffee roaster's common stack whenever either roaster is operating above 350°F. [06-096 CMR 115, BPT]
- (18) X Café shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S.A. §605).

DONE AND DATED IN AUGUSTA, MAINE THIS 17th DAY OF November, 2009.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:

David P. Littell
DAVID P. LITTELL, COMMISSIONER

The term of this license shall be five (5) years from the signature date above.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 7/13/09

Date of application acceptance: 7/15/09

Date filed with the Board of Environmental Protection: _____

This Order prepared by Lynn Ross, Bureau of Air Quality.

